

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-18. (cancelled)

19. (previously added) A reductant delivery system, comprising:  
an evaporator unit including at least a heating element;  
a mixing device having at least one inlet and at least one  
outlet coupled to said evaporator unit; and  
a controller for introducing reductant and air into said mixing  
device through said inlet, mixing said reductant and air,  
injecting said mixture or said reductant and said air through  
said outlet having an outlet area smaller than said mixing unit  
into said evaporator unit thereby causing evaporation of said  
reductant and air mixture, the reductant delivery system  
protruding into an exhaust gas flow of an internal combustion  
piston engine of a mobile vehicle.

20. (previously added) The system as set forth in claim 1 wherein said  
reductant is hydrocarbon.

21. (previously added) A method for vaporizing a substance in a  
reductant delivery system for an exhaust gas aftertreatment  
device, the system having at least a heating element, the  
method comprising:

generating a mixture by mixing a predetermined amount of  
reductant with a predetermined amount of air, the reductant  
including hydrocarbon, and  
injecting said mixture into the reductant delivery system  
thereby causing said mixture to vaporize, the reductant  
delivery system protruding into an exhaust gas flow of an  
internal combustion piston engine of a mobile vehicle  
upstream of said exhaust gas aftertreatment device.

22. (previously added) The method as set forth in claim 21  
wherein said reductant is hydrocarbon.

23. (previously added) The method as set forth in Claim 21 wherein the exhaust gas aftertreatment device is an Active Lean NOx catalyst (ALNC).

24. (previously added) The method as set forth in Claim 13 further comprising directing said vaporized mixture into said ALNC.

25. (previously added) A method for controlling a reductant delivery system having at least a heating element, the system coupled upstream of an exhaust gas aftertreatment device of an internal combustion piston engine in a mobile vehicle, the method comprising: injecting air into the system; vaporized mixture, said reductant including hydrocarbons; and directing said vaporized mixture into the exhaust gas aftertreatment device via said reductant delivery system, said reductant delivery system protruding into an exhaust gas stream from said internal combustion piston engine.

26. (previously added) The method as set forth in Claim 25 wherein said reductant is hydrocarbon.

27. (previously added) The method as said forth in Claim 25 wherein the engine is a diesel engine.

28. (previously added) The method as set forth in Claim 25 wherein the exhaust gas aftertreatment device is an ALNC.

29. (previously added) A reductant delivery system, comprising: an evaporator unit including at least a heating element; a mixing device having at least one inlet and at least one outlet, coupled to said evaporator unit; a controller for introducing reductant and air into said mixing device through said inlet, and injecting a mixture of said reductant and said air through said outlet into said evaporator unit thereby causing evaporation of said reductant and air mixture, wherein said reductant and air mixture contacts a surface of said heating element, and where said evaporated reductant and air enters exhaust gas of an internal combustion engine.